

**Knittel, Janette**

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**From:** Kizz Prusia <kprusia@triangleassociates.com>  
**Sent:** Wednesday, November 27, 2019 4:39 PM  
**Cc:** Hale, Elly; Congdon, Julie; Annie Kilburg  
**Subject:** Lower Duwamish Waterway (LDW) November 13 Stakeholders Meeting Follow-up  
**Attachments:** 2019-FINAL-VERSION-presentation-for-Nov-13-2019-Stakeholders-Meeting-v.11-25-19.pdf;  
Ecology\_Sites\_Updates\_Nov-11-2019-003.pdf

## Lower Duwamish Waterway (LDW) Cleanup Stakeholders Meeting

Lower Duwamish Waterway Stakeholders,

At the **November 13** Lower Duwamish Waterway (LDW) **Stakeholders meeting** participants received report outs from the US Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and the Duwamish River Cleanup Coalition/Technical Advisory Group (DRCC/TAG) regarding the cleanup of the Lower Duwamish Waterway.

Please see attached for the presentation slides shared during the morning Stakeholders meeting.

Please do not hesitate to let me know if you have any questions.

Thank you

Kizz



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# Lower Duwamish Waterway Stakeholders Meeting

November 13, 2019

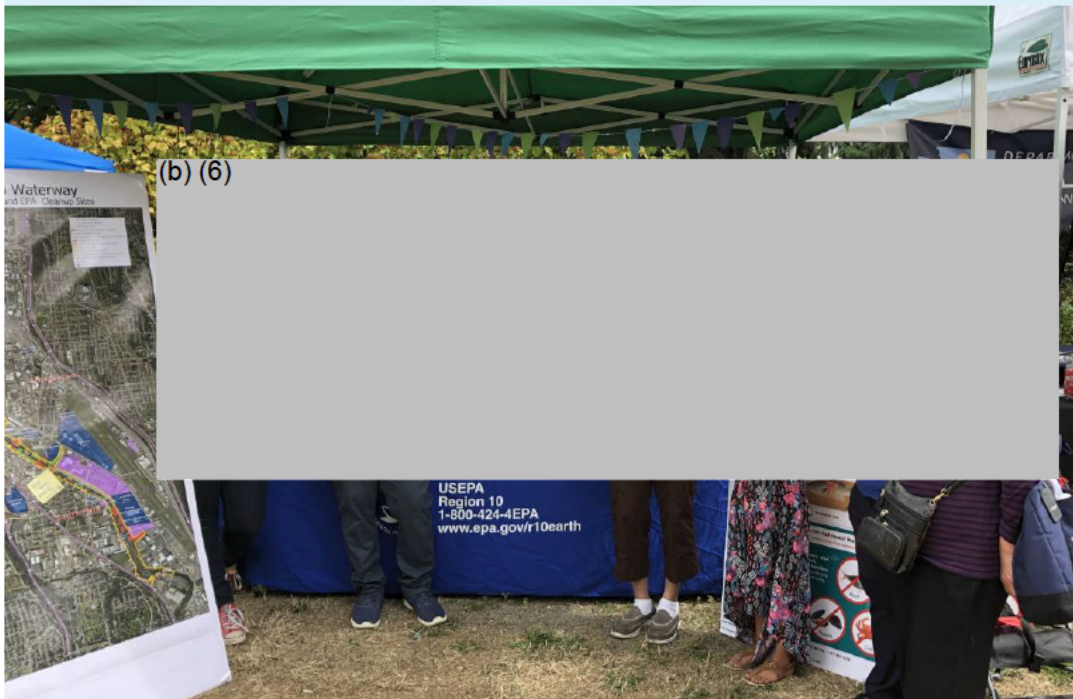


# Community Involvement Updates



# EPA's Activities

## August 17 Duwamish River Festival & Boat Tour



## September 5 Port of Seattle Boat Tour





# EPA's Events and Activities

## Fiestas Patrias in South Park

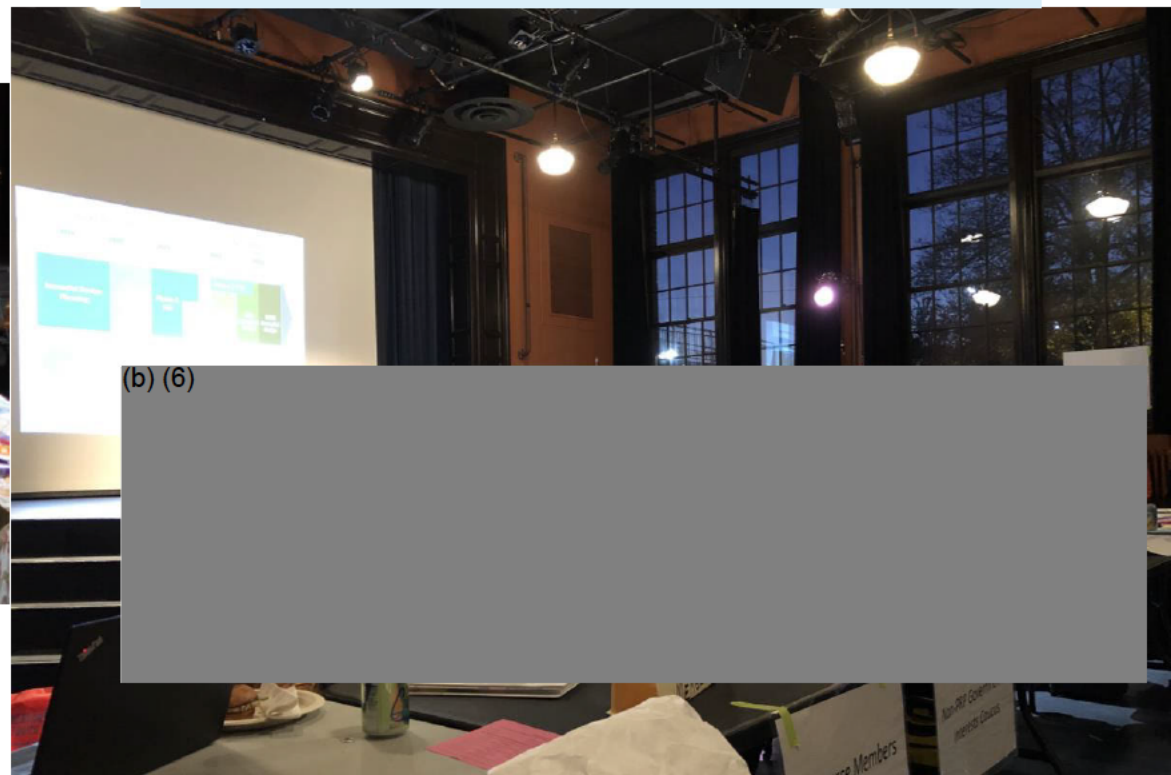


# Duwamish Roundtable

May 29



October 30





# EPA / Ecology / DRCC-TAG

## June 18 Duwamish Cleanup: Community Open House

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# Ecology's Events and Activities

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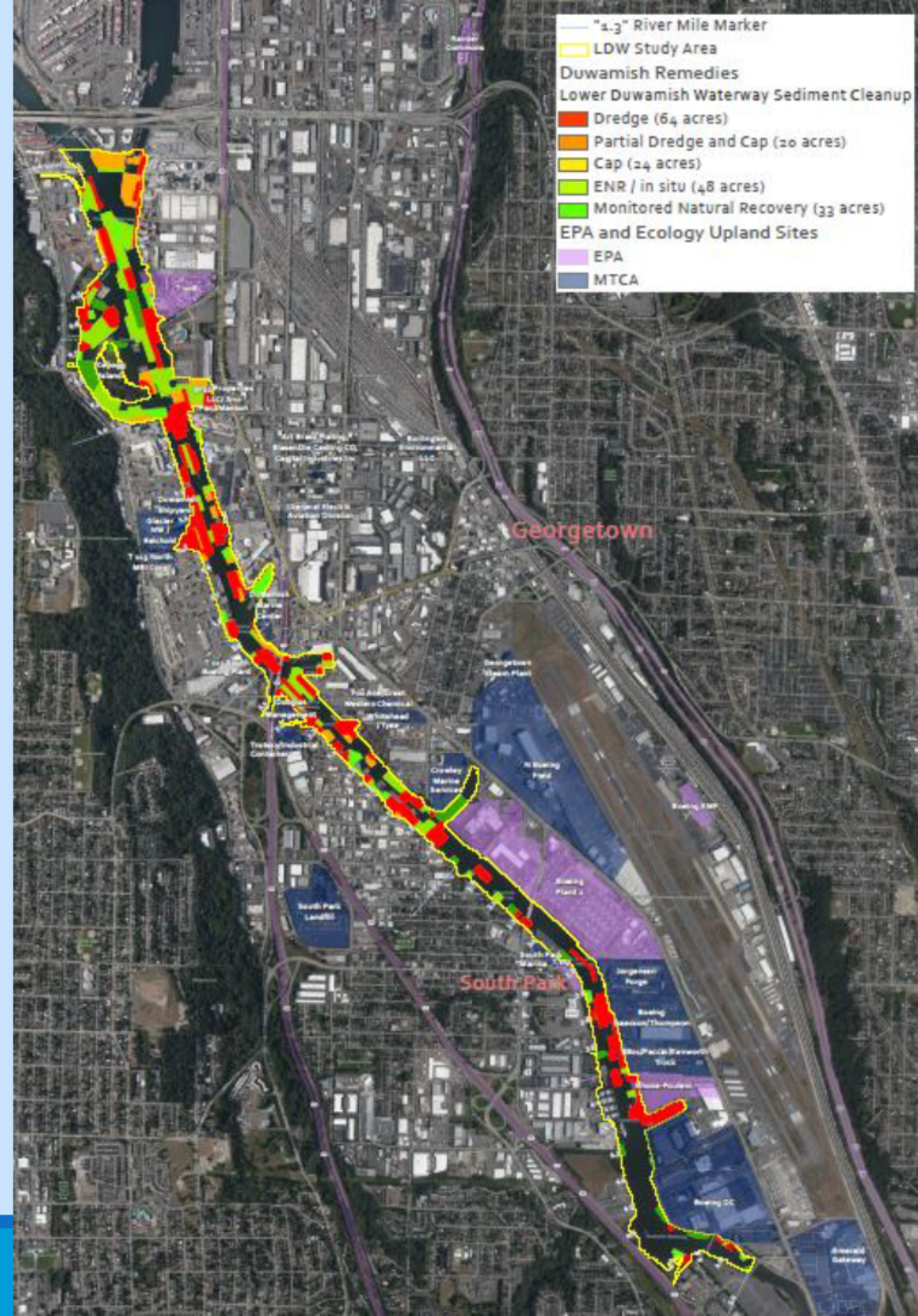
- ✦ Public Comment Periods: Community Meetings



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**Any questions?**

# EPA's Superfund Cleanup of the LDW





# Pre-Design Studies (AOC3) Data Evaluation Report



# Pre-Design Studies (AOC3) – Data Evaluation Report

- Sampling for baseline and source control
- Fish, crabs, clams, as well as sediment and surface water
- Draft Final expected in December 2019
- Under AOC4, LDWG will repeat fish, crab, and passive surface water sampling in 2023

## LOWER DUWAMISH WATERWAY DATA EVALUATION REPORT (TASK 6)

**DRAFT**

Prepared for

Lower Duwamish Waterway Group

For submittal to

US Environmental Protection Agency

December 17, 2018

Prepared by: **Windward**  
environmental LLC

200 West Mercer Street, Suite 401 • Seattle, Washington • 98119



# Upper Reach Remedial Design (AOC4)

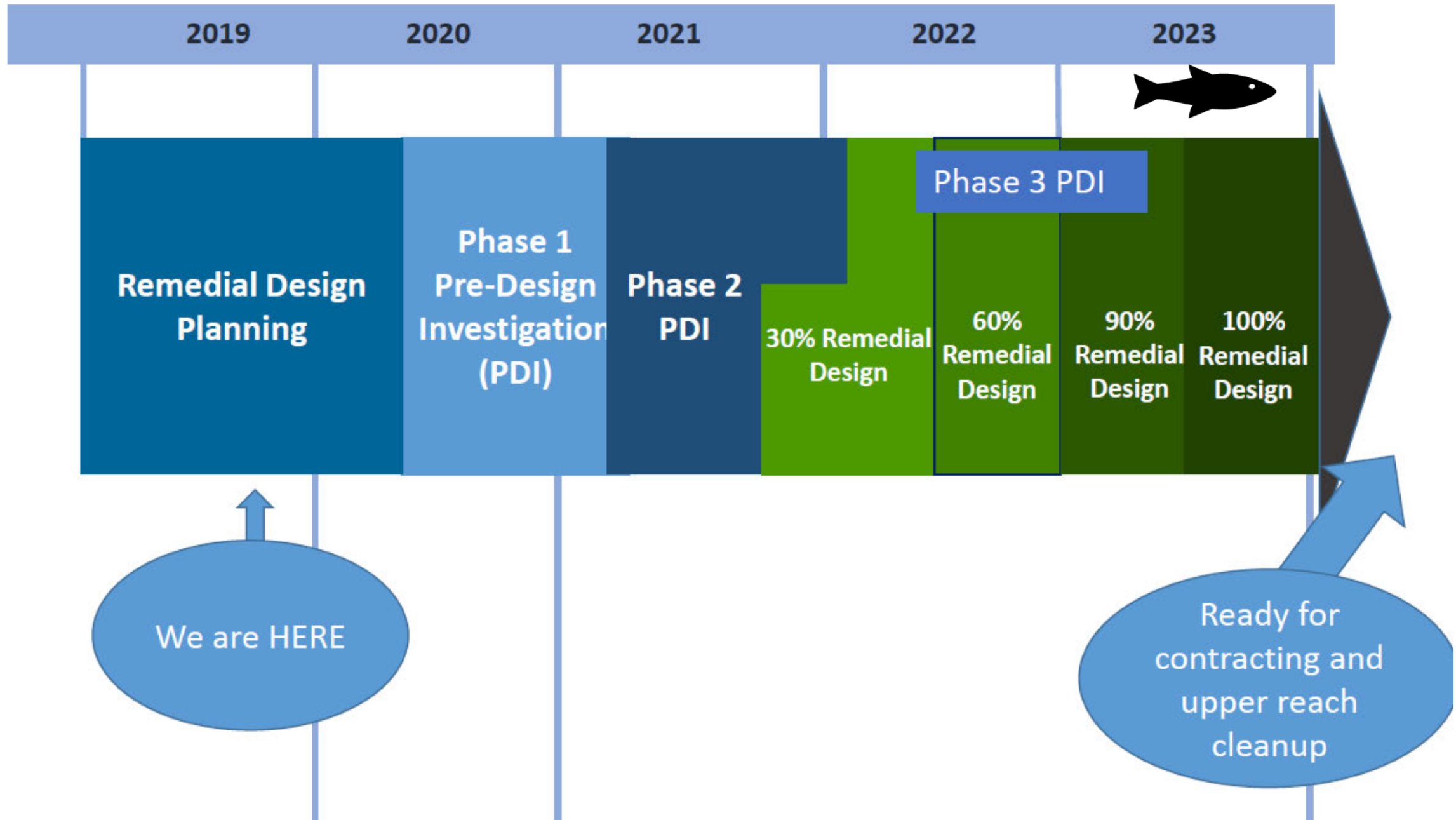
RD work plan (Anchor)

Describes RD process, phasing, schedule, deliverables

- June draft reviewed
- Expect final by early December 2019
- LDWG.org web page will have final posted

Includes pre-design investigation (PDI) work plan (Windward)

# Upper Reach Remedial Design Schedule (may change)





# PHASE I Pre-Design Investigation

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Phase I field work in early 2020

QAPP due November 26

- Details of field sampling and analytical methods
- Proposed locations of sampling, including samples to archive
- Analysis of tiered sampled depends on primary sample results
- Phase 2 QAPP to fill data gaps following review of Phase I results

# PHASE I Pre-Design Investigation

Follows ROD logic: location (subtidal/intertidal/channel), recovery categories, depth intervals and RALs

Summarizes available data relative to ROD action levels

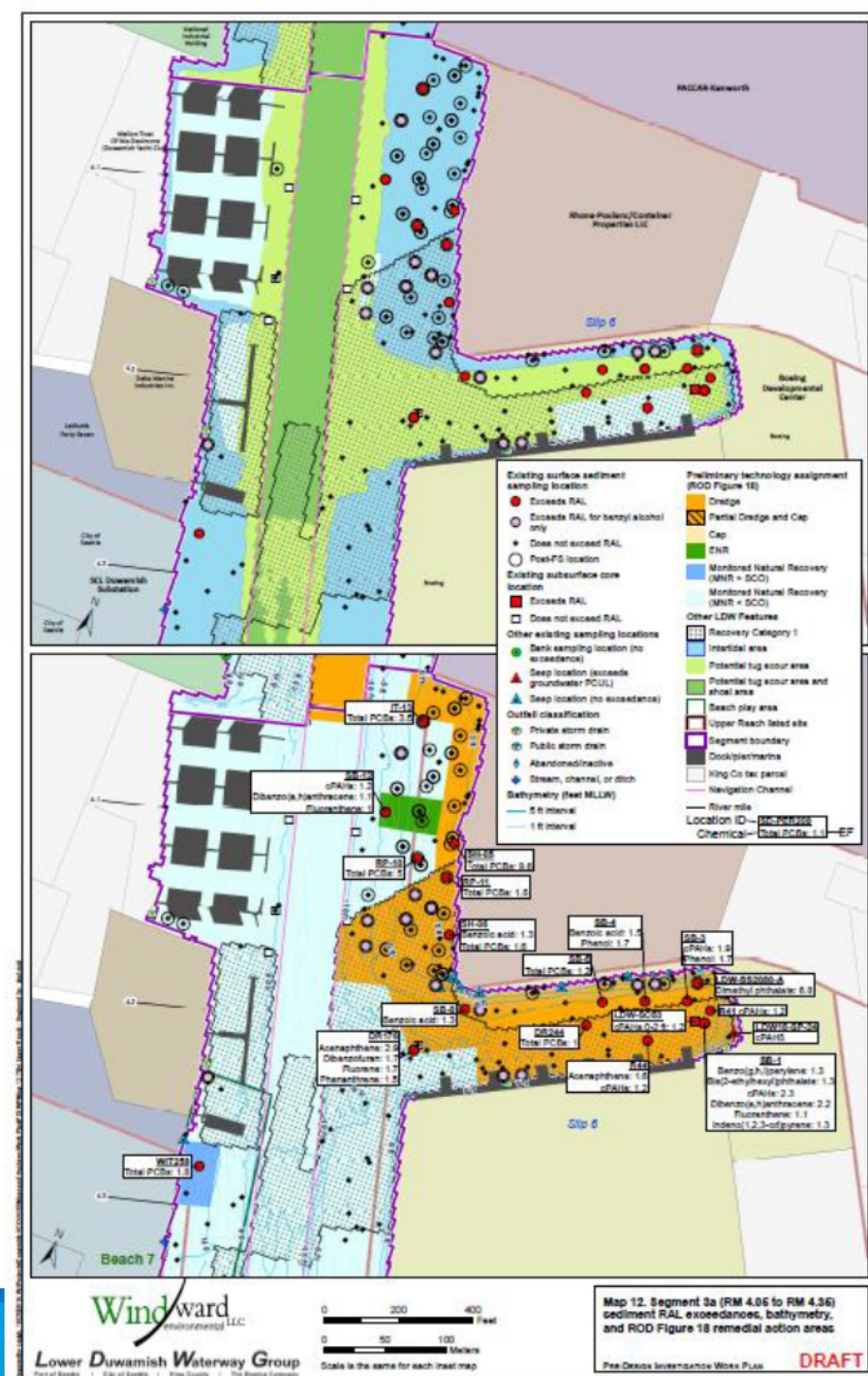
Approach to Phase I sampling:

- Revisit places with few or low RAL exceedances
- Bound areas of known contamination
- Ensure coverage of areas with no data

Proposes archiving samples for tiered analysis.

Provides a hypothetical example of tiering

Considers biological testing of some samples





## Example from PDI WP

Patchy sample distribution – RI, Early Action Areas, other data sources

Corps will dredge turning basin and some channel  
– no more data needed there

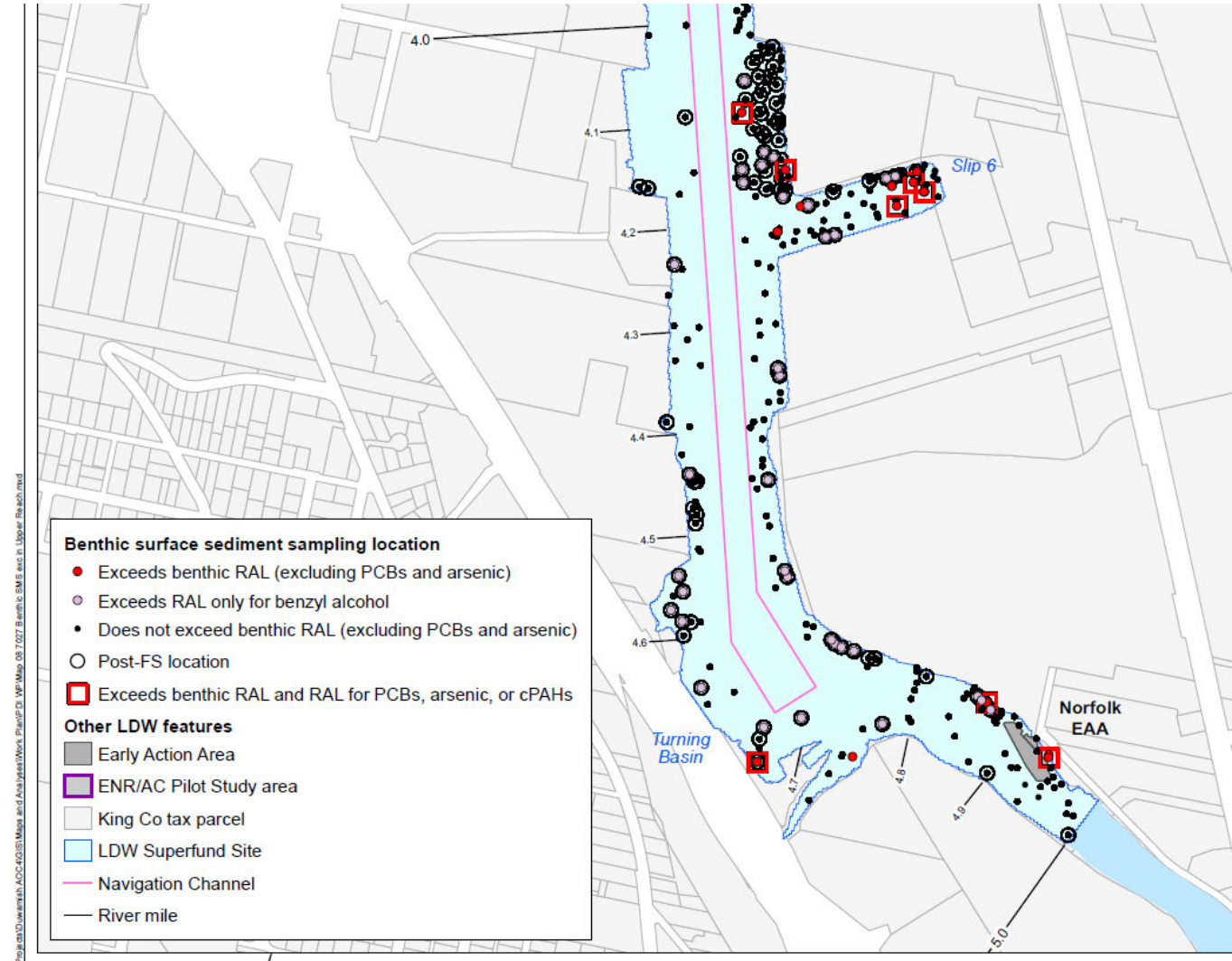
Black dots/circles – below RAL (action level)

Red and lavender – above RAL

Lavender: exceeds only for benzyl alcohol

Recent data suggest this RAL may not predict toxicity to benthic organisms.

If benzyl alcohol alone exceeds the RAL, may “pass” benthic toxicity test. QAPP will propose tests to determine if active cleanup is required.



*Excerpt from Map 8 of PDI WP*

# Carbon Amendment Pilot Study (AOC2)

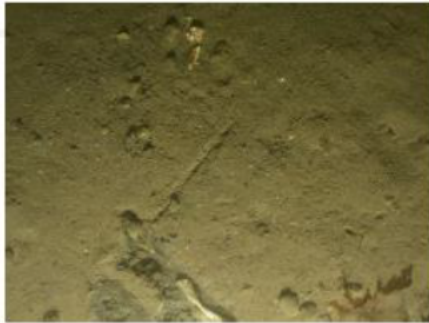
DQO	Phase	Completed
DQO-1: Verify the Placement of the ENR and ENR+AC Materials	Y0	✓
DQO-2: Evaluate the Stability of ENR and ENR+AC Materials	Y1	✓
	Y2	✓
	Y3	Y3
DQO-3: Assess Changes in Bioavailability in ENR+AC Compared to ENR Alone	Y1	✓
	Y2	✓
	Y3	Y3
DQO-4: Assess the Potential Impacts of AC on Benthic Communities	Y3	Y3



# SPI Cameras – Plan and Profile Views

## Scour Plot and Subtidal Plot

Y2-SC-ENR-4B



SC-ENR+AC-1A



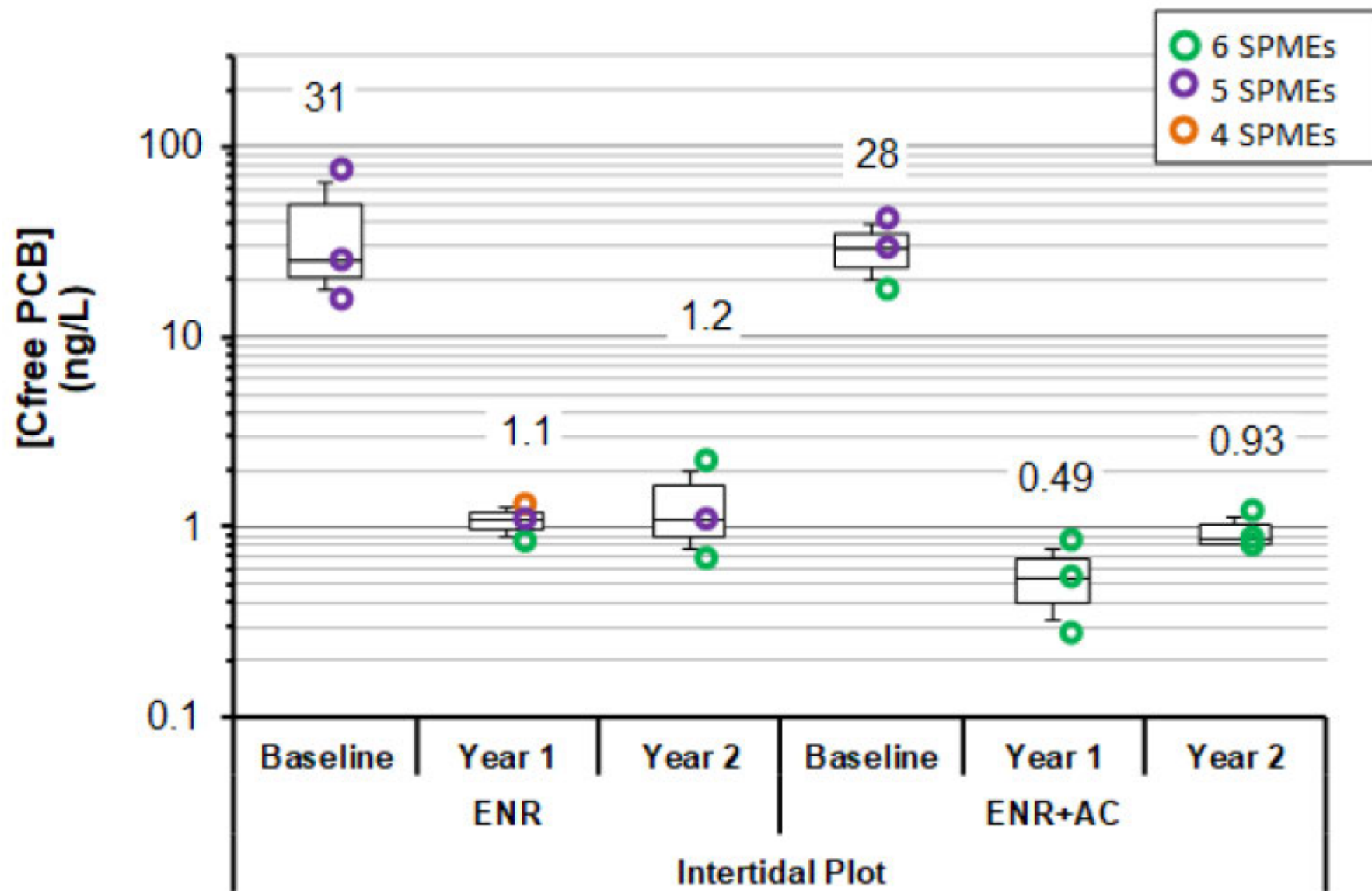
Y2-SU-ENR-6A



Y2-SU-ENR+AC-3A



# $C_{\text{free}}$ for Intertidal



# Fish Consumption Institutional Controls

US EPA's Institutional Control Implementation and Assurance Plan (ICIAP) for Seafood Consumption at the Lower Duwamish Waterway (LDW) Superfund Site



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LDW Seafood Institutional Controls  
Fun to Catch, Toxic to Eat Program

FINAL  
August 2019



**Public Health — Seattle & King County**

Environmental Health Services

Community services and resources

Fishing for safe seafood to eat

Health advice for moms and children

Duwamish River Superfund site

Community outreach

About the program

ភាសាខ្មែរ | Khmer

Español | Spanish

Tiếng việt | Vietnamese

Health Impact Assessment (HIA)

Noise guidelines

School plan review

Water recreation permits

Home » Public Health — Seattle & King County » Environmental Health Services » Community services and resources » Fishing for safe seafood to eat

## Fishing for safe seafood to eat

The only Duwamish seafood safe to eat is salmon

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Photo by: Alex Montalvo of Revel Riter Media

In the Duwamish River, the seafood that spend their entire lives in the river (perch, sole, flounder, crab, mussels and clams) are unsafe to eat. They have high levels of toxic chemicals (such as PCBs) that you cannot see.

Toxic chemicals can harm unborn babies, infants and young children the most – impacting their memory, attention, motor skills and language development.

### Protect your health:

🐟 Eat salmon!

Health advice for moms and children

Duwamish River Superfund site

Community outreach

About the program

ភាសាខ្មែរ (Khmer)

Español (Spanish)

Tiếng việt (Vietnamese)





# FUN TO CATCH TOXIC TO EAT

THE ONLY DUWAMISH SEAFOOD SAFE TO EAT IS SALMON

**Policy & Partnership Recommendations** that address certain barriers can enhance the positive impacts

## WDFW Fishing License & Rules

Improve WDFW's fishing license purchasing online system and multilingual education on fishing rules to support fishing for salmon only in the Duwamish River or at alternative fishing sites.

## Transportation Support to Alternative Fishing Sites

Provide transportation support for Duwamish fishers to get to alternative fishing sites on a regular basis.

## Cleanup Contamination



## Targeted IC Strategies\* focus on target audiences

### Duwamish Fishing Club



Partner with WDFW and bait and tackle stores to create a club of Duwamish fishers (with a fishing competition) to provide training on how to catch salmon on the Duwamish River (phase 1) and educational visits to alternative fishing sites to increase their knowledge about other safe seafood to catch in Seattle and South King County (phase 2).

### Schools & Youth Programs



Provide a grant to a school or youth program to develop a strategy that increases knowledge about the Duwamish seafood advisory among youth/students from priority fishing communities in the Seattle and South KC.

### Community Centers & Faith Organizations



Provide a grant to a community center or faith organization that serves a priority ethnic/language fishing community (not already represented on our CHA teams) to develop a strategy that increases their knowledge about the Duwamish seafood advisory.

### Moms Classes & Salmon Cooking Demos



Partner with community health clinics and community kitchens to educate moms and caregivers of young children who receive local seafood catch about the health reasons for accepting only salmon from the Duwamish River, and demonstrate how to prepare culturally appropriate salmon dishes.

## Positive Program Impacts after implementation of IC strategies

### Short-Term Impacts

By start of cleanup, there will be improved knowledge among Duwamish fishers about the Duwamish seafood advisory.

### Medium-Term Impacts

During active cleanup, the improved knowledge, skills, self-efficacy, and positive social norms and attitudes provided by the IC strategies will:

- Support Duwamish fishers to fish only for salmon from the Duwamish River and/or fish for safer seafood at alternative sites in Seattle and South King County.
- Increase the likelihood of Duwamish fishers to catch only salmon on the Duwamish River or go to alternative fishing sites (compared to the short-term impact results).
- Support healthy seafood choices by moms (including pregnant/nursing women) and caregivers of young children receiving local seafood catch from the Duwamish River.
- Increase the likelihood of the moms and caregivers in this target group to accept, prepare, and eat only salmon from the Duwamish River.

### Long-Term Impact

Achieve the program goal of promoting culturally appropriate healthy actions that protect the health and well-being of fishing communities, especially pregnant women, nursing moms and young children, from the contaminated resident seafood in the LDW Superfund Site before, during, and after the cleanup.

### Short-Term Impact

By start of cleanup, there will be improved knowledge, skills, self-efficacy, and positive social norms and attitudes about choosing only salmon from the Duwamish River or other healthy seafood choices among moms (in particular, pregnant/nursing women) and caregivers of young children who receive local seafood catch.

## Community Steering Committee's Long-Term Environmental Justice Vision (2018)

*Environmental Justice is achieved when no communities based on race, ethnicity, language, or socioeconomic status have a disproportionate burden of the health risks associated with the contaminated seafood from the Duwamish River.*

*We can all eat more fish safely from the river. We can enjoy the river. There is now a positive public perception about the river and its resident seafood.*

*Our community is empowered, and we have a strong voice to advocate for ourselves. The history of our community work for this river is not forgotten.*

## Other Local Efforts



Other important efforts by communities, local governments, and organizations.

## Policy & Partnership Recommendations

that address certain barriers can enhance the positive impacts

### Supermarket Seafood Labeling

Label supermarket seafood that are safe for pregnant/nursing moms and young children.

### Healthy Fish Options at Food Banks

Offer healthy fish options at food banks in the target geographic area.

### Supermarket Discounts for Healthy Seafood

Provide coupons for healthy seafood at local supermarkets in the target geographic area.

## Community Health Advocates (CHAs)

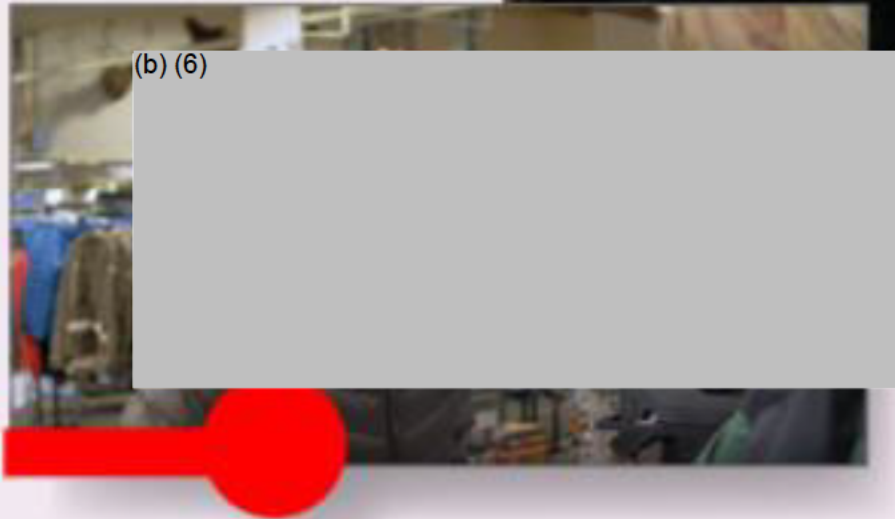
The CHAs are the foundation of this community-based program. As a voice for their affected fishing communities, they promote safe seafood consumption in their communities, advocate for culturally appropriate recommendations, and collaborate with Public Health on programmatic decisions and designing and implementing the strategies and tools.



\*Strategies will be adapted based on evaluation results, saturation of target audiences, and/or changes to the DOH seafood consumption advisory.



**Video series:**  
"Healthy  
Fishing in the  
Duwamish:  
Let's Catch  
Salmon"






**Questions?**

**Answers!**

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# Source Control Updates

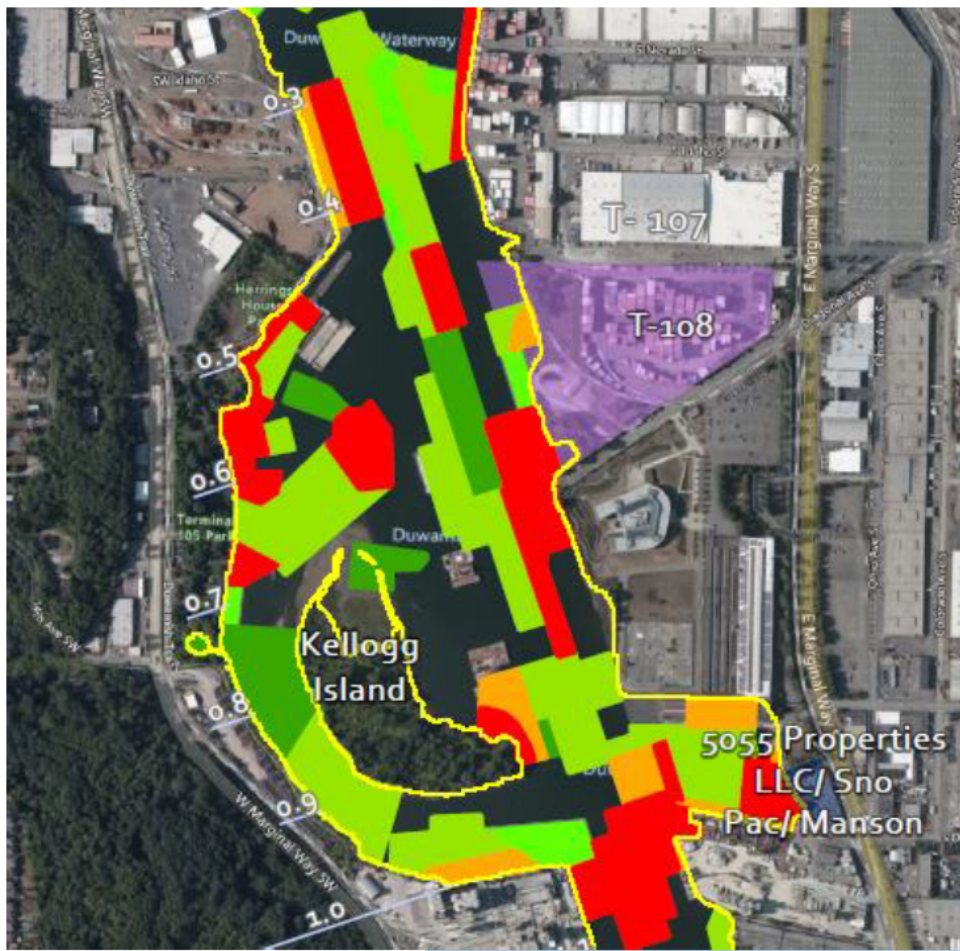




# EPA's Upland Sites: Boeing Plant 2







# EPA's Upland Sites:

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## T 108







# EPA's Upland Sites: Former Rhone Poulenc





# EPA's Upland Sites: Rainier Commons





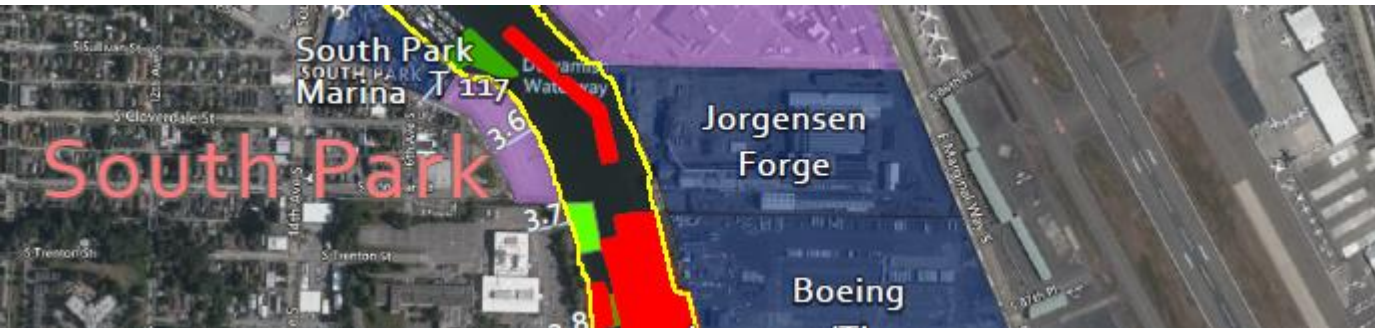
# EPA's Early Action Areas



# EPA's Early Action Areas:

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## Earle M. Jorgensen





# EPA's Early Action Areas:

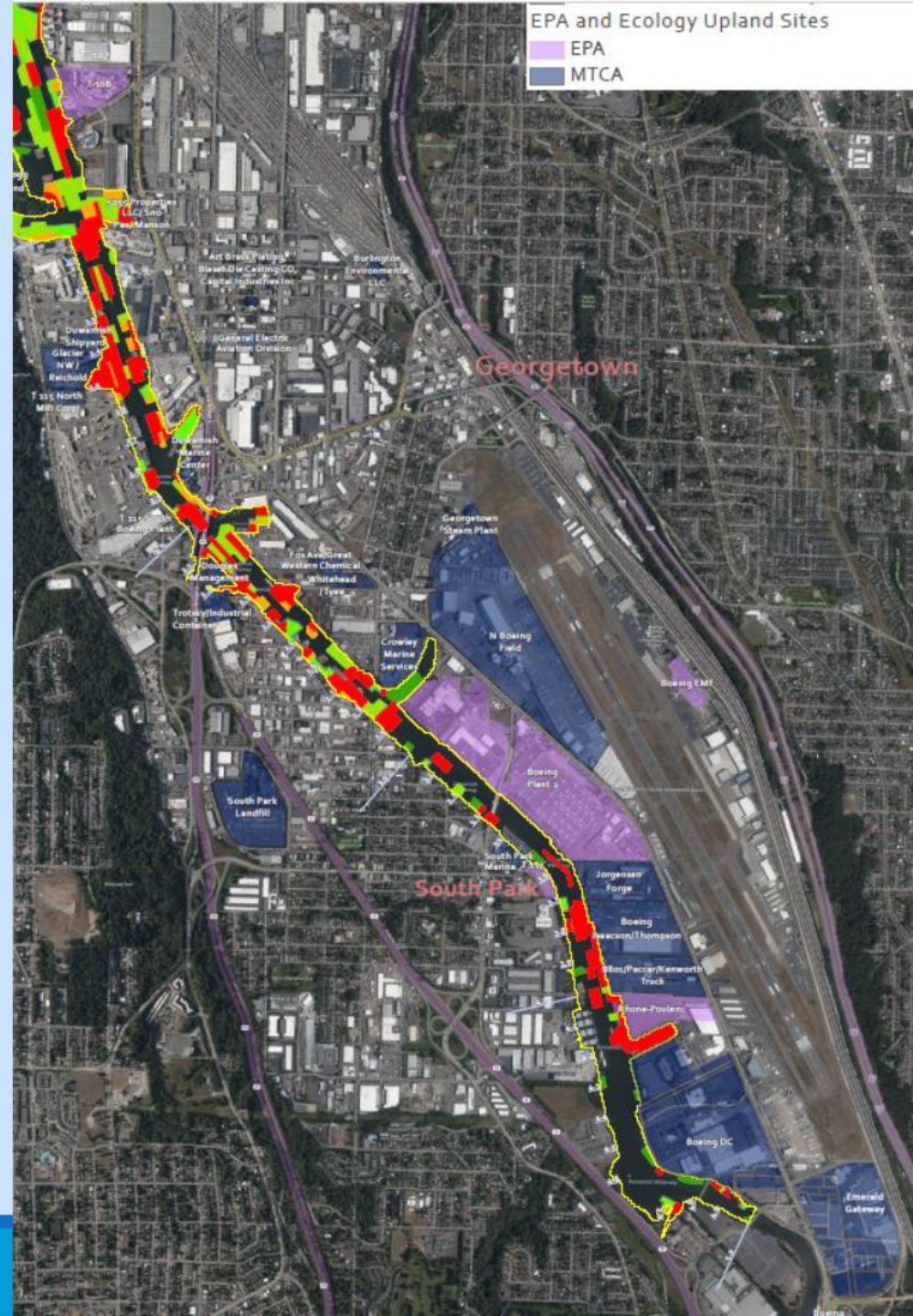
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## T117, Boeing Plant 2 (in-water work) Slip 4

Data from recent monitoring of the completed Early Actions

- T117 data – first sediment monitoring since construction – 2019 (Year 4)
- Boeing Plant 2 data – Year 3 (2018) monitoring. Next is Year 5 (2020)
- Slip 4 data –Year 7 (2019) report due late November. Next is Year 10 (2022)
- Norfolk and Duwamish Diagonal CSOs – monitoring no longer required

# Ecology's Upland Sites Updates







# EPA's Sites Adjacent to the LDW



# Lockheed West Seattle:

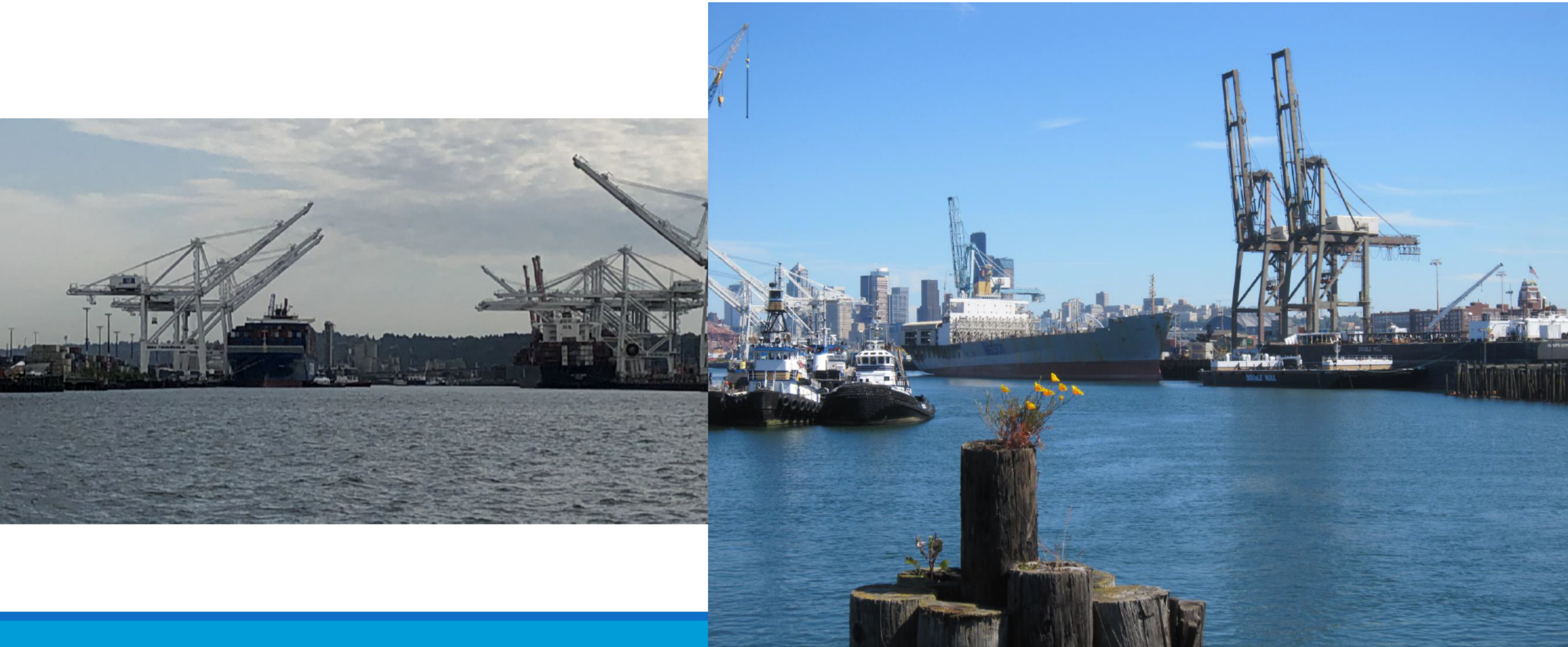
## Second season of Remedial Action complete





# East Waterway:

Proposed Plan – anticipated release in early 2020





# Pacific Sound Resources: Five Year Review completed





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**Any questions?**

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# **DRCC/TAG: Cleanup-Related Activities**




**Any questions?**

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# Next Stakeholders Meeting:

Wed., June 10,  
2020

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# Lower Duwamish Waterway Uplands Sites Update

November 13, 2019



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Upland Sites in RI Phase

- Crowley Marine Services
- Douglas Management Dock
- Duwamish Marine Center
- Industrial Container Services
- North Boeing Field /Georgetown  
Steam Plant
- Terminal 115 N





# Upland Sites in RI Phase (Cont.)

- Snopac Property
- Boeing Developmental Center
- South Park Marina (RI work plan)
- Whitehead Tyee (RI work plan)
- Jorgensen Forge Corp (RI work plan)



# Upland Sites in FS Phase

- Duwamish Shipyard
- Boeing Field Chevron
- Boeing Isaacson/Thompson
- Glacier Northwest Inc





# Upland Sites: New Agreed Orders

- Emerald Gateway – Currently in public comment (Oct 28 to Nov 20) for agreed order and interim action work plan.
- Terminal 115 Main – Negotiations for agreed order continue.
- Precision Engineering – Negotiations for agreed order started.



# Other Upland Sites Updates

- General Electric Aviation
  - 5 Year review in process
- East of 4<sup>th</sup> – cleanup ongoing
- West of 4<sup>th</sup> – vapor intrusion study





# Other Upland Sites Updates

- 8801 E Marginal Way
  - Public comment completed.
  - 24 comments received, Ecology working through responses.
  - Final work plan pending.



# Other Source Control News

## Ecology

- 2017 Status report is available
- Working on 2018 status report

## King County

- Updated their Source Control Plan



# Other Source Control News (cont)

- Port of Seattle
  - Environmental Compliance Assessment Program (ECAP) - 5 locations
  - Stormwater Pollution Prevention inspections - 5 locations
- City of Seattle
  - Inspected 143 businesses
  - Collected 124 source tracing samples
  - Jetted and cleaned more than 15,000 feet of pipe in the City's drainage system to remove contaminated sediment that could otherwise reach the LDW





# Contacts

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Toxics Cleanup Program

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Source Control Lead

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